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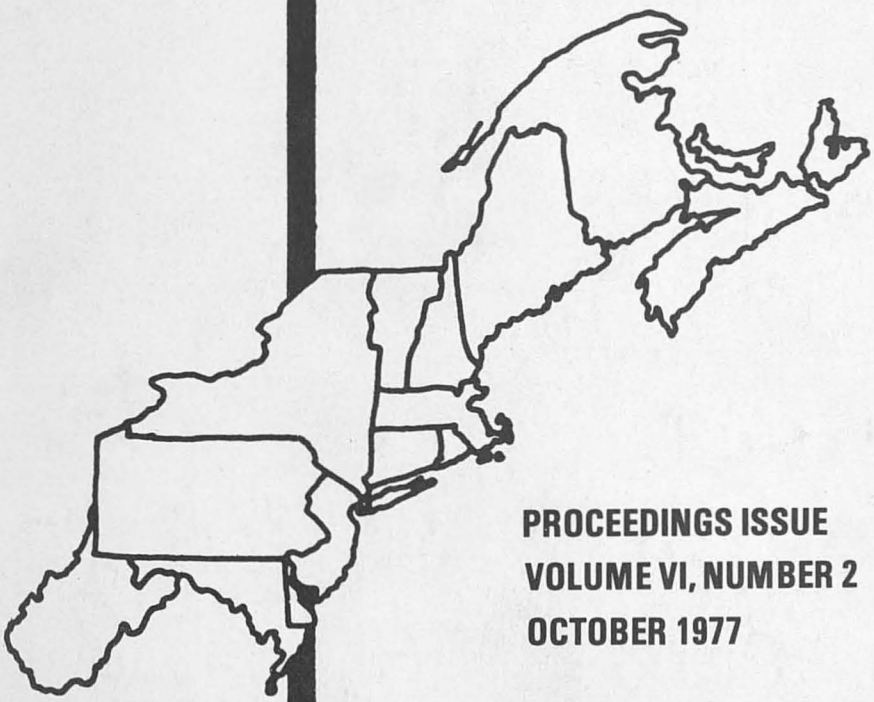

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A NEW DEGREE IS NEEDED: MASTER OF AGRICULTURAL ECONOMICS

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Most members of the agricultural economics profession are aware of the changes that are taking place in society and the impact of these changes on our programs, particularly graduate and undergraduate training programs. Certainly the journals of our profession have included many articles relating to our changing mission and the changes that are occurring or should occur in our programs [1,2,4,5,7]. The next section of this paper contains a brief review of some of these trends in order to establish the need for a new degree, which is described and discussed in the final two sections of the paper.

Current Trends

We are told that in the near future there will be a declining number of students entering bachelor's degree programs in our universities. A major implication of this observation for the type of training we give our graduate students is that there will be fewer teaching opportunities at major universities. For example, Helmberger [4, p. 730] has reported that in the 1980's the full-time equivalent enrollment in U.S. colleges and universities is expected to decrease 863,000 or about 9 percent and that faculty needs will fall by 7 percent. He concludes, along with a variety of other authors, that there will be very few opportunities for students who have obtained a Ph.D. degree to teach at major research universities. Continued emphasis in agricultural economics programs on training most suited to employment by major research universities may be frustrating both to our students and to our own sense of relevance to society's needs.

There is, however, a potential for increasing employment in other applied areas of agricultural economics training. For instance, Erikson [3, p. 880] has reported that agri-business firms are increasingly interested in hiring economic analysts with master's or doctoral level training. There is also a potential for growth in the areas of business management (as contrasted to economic analysis) and in public administration. Many jobs in business as well as in public agencies administering programs in natural resources, community development, and environmental quality can be filled by people with training in agricultural economics. There also is potential for greater employment opportunities in adult education such as Agricultural Cooperative Extension programs and

continuing education efforts of universities, four-year colleges and junior colleges. For these positions, training in a mode of instruction that is appropriate to a general audience will be increasingly useful in the future.

Finally, many of our present students are realizing that they do not really want or need a research oriented education, but are trapped into that type of education because of the limited offerings at the master's level in our subject matter. Specifically, I would point to students aiming for management jobs with agri-business or natural resource agency administrative positions along with many students from other countries who are intending to return to agricultural development agencies in their home countries as administrators and planners rather than as researchers. As individuals who could make use of a different type of training, these people find training in statistical and research methods to be interesting (in some cases) but not directly applicable to their career plans.

The preceding list suggests that we need a degree that is different from what is currently offered. In fact, this point has been made several times in the literature. Plaxico [6] questioned the universal applicability of the M.S. degree when he asked,

> "Is the M.S. degree in agricultural economics losing its significance as more universities offer the Ph.D. in the field? More and more departments view the M.S. as a consolation prize. Yet M.B.A. programs are growing and their product is in demand. Have we lost touch with the nonacademic market? Are we overlooking a real service opportunity?"

In a different setting and at a later point in time, Helmberger [4, p. 731] stated,

> "Instead of a graduate program that implicitly assumes that all of our Ph.D.'s will teach and research at universities, we should recognize that we should have at least a three-track system: The current one, a teaching track (for four-year and junior colleges), and a nonacademic, non-R and D track. The nonacademic, non-R and D track might well be to produce a <u>professional master's degree</u> that is deliberately designed to tap this market (emphasis added)."

I believe that the time has come for the agricultural economics profession to develop a professional degree, and I propose to call it the Master of Agricultural Economics (MAE).

Outline of the Degree

The exact subject matter to be included in the requirements of the degree will of course vary from school to school. There is some advantage, however, in a common understanding about the basic elements of a

professional degree. For that reason I offer my thoughts on this subject in the following paragraphs. Perhaps professional discussion will lead to a common understanding of a "core" for the Master of Agricultural Economics degree.

Because I believe that a degree in agricultural economics must train a person to be an economist, it would obviously follow that I believe courses in economic theory are essential. At least one semester course in graduate level microeconomic theory and one course in graduate level macroeconomic theory should be required. These courses should be at a level which uses the standard "intermediate" level theory courses as prerequisites. Course work in quantification is also essential because quantitative manipulation is important in managerial and operations positions as well as in research positions. For some students a course in statistical methods and inference would be most appropriate; in other cases courses in programming or other operations research methods would be more useful.

A block of courses ought to be devoted to methods appropriate to a particular application of professional competence. Here I have in mind such things as business management methods, public administration techniques, or adult education methods. These courses probably would be taken from offerings in another department and would give the student the professional skills that he plans to apply upon completion of this degree.

Supporting courses (probably the majority of the program) would stress communication skills and applications of the theories and methods learned in the previous blocks of courses. These courses could include the institutions and policies as well as economic analysis appropriate to understand performance in the subject area. Since business employers perceive a sizable deficiency in the communication skills of many of our master's and doctoral graduates [3, p. 880], some course work ought to be devoted to sharpening written and oral communication skills. Developing such a course may require some innovative work in collaboration with speech or English departments, but the payoff for success in this effort may be high. The final set of credits should be devoted to application. This could be through an internship or work experience which included a written report of the project or it could require a paper stressing applications of knowledge to real world situations. I would think that this paper ought to be in the form of a professional report rather than in the traditional thesis form.

It is frequently asked how many credits should be required for such a degree. Other professional master's degrees vary greatly in the number of credits required ranging from as few as 30 semester credits, the same as the usual M.S. program, to as many as 60 semester credits. I believe that the purposes of this degree could probably be accomplished in about 36 semester credits divided as shown in Table 1. Obviously some areas such as professional methods, might be adjusted to reflect the wealth or paucity of offerings in these areas at a particular institution.

Table 1
Subject Areas and Credit Hour Requirements for the MAE Degree

Subject	Semester Credits
Economic theory (micro and macro)	6 (3 each)
Quantification	3
Professional methods (business, public administration or adult education)	6
Supporting courses (including communications)	12
Application (internship, paper, etc.)	9
Total	36

The heart of the program appears to be in the supporting courses. Here is where agricultural economics departments may make a unique contribution and thereby create a unique degree. These courses must include subjects of relevance to the agri-business industry, rural public administration, or adult education. For example, case-study courses may be developed around actual problems faced by agri-business firms or resource management agencies. In these courses, economic principles would be applied to analyzing real situations where interactions with firm or agency objectives as well as implementation realities would be learned, perhaps by interacting with representatives of the firm or agency which handled the problem initially. Other courses could be developed which teach the institutional setting for food processing, chemical supply or environmental regulation. These courses would give students a better understanding of the legal and social framework in which economic decisions must take place. To be most effective, these courses must include a heavy dose of the real world with a minimum of simplifying assumptions, yet always stressing the application of economic principles to problem solving.

Some schools currently offer courses similar to the examples above. Others would need to develop such courses if they were to offer a Master of Agricultural Economics degree. It may develop that most schools will not offer all three of the options I have outlined, but will stress the one or two areas they believe their faculty can best provide. Whether one, two, three, or more options are developed it is the supporting courses that make a product that is different from graduates of the schools of business, education, or public administration. We in agricultural economics can develop people who have the basic tools provided

by the professional programs while at the same time develop a deeper knowledge of economics and the interest in applications to rural or agricultural problems.

Why a New Degree?

Most departments of agricultural economics currently provide a great deal of flexibility in their master of science program. Many of the objectives which I have outlined in terms of a master's degree can be and are being accommodated under the present master of science programs at these institutions. Why then do I propose that we create a new degree with a new designation that is unfamiliar to most employers? The primary answer can be found in my opening comments about the future trend of employment for people with advanced degrees in agricultural economics. I believe the market is expanding rapidly in professional applications other than research. Thus, I believe it is important that we develop training aimed specifically at the non-research objectives. This leads to the first reason that I propose a new degree, that being to distinguish research training from other types of training. The multiplicity of training that can be obtained under the master of science leads to confusion about what is included in a person's training. The Graduate Council at The Pennsylvania State University recently brought this confusion to the attention of all graduate faculty at our institution by proposing that the designation master of science or master of art be used only for those master's programs which require a thesis and are aimed at the development of research competence. I agree with the general premise that the master of science degree ought to be a strictly "science" degree. That is, students who receive such a degree have been trained for research and given some practice in the conduct of research as a method of discovering truth in a particular subject matter area. While there is still some variation in the MAE degree proposed, it is variation in the area of application. All three options within the MAE stress economic analysis and its application to practical problems. Thus, a person holding an M.S. degree is oriented toward research while the MAE degree holder is oriented to applications of economic analysis. I believe there is great virtue in being able to determine the type of training an individual has received by the type of degree held.

My second reason for proposing a new degree is to emphasize the distinction between the education I have outlined and that usually contained in the MBA, MPA, or M. Ed. degrees. The existing professional degrees give preparation in the methods of a particular profession, emphasizing business principles, political science, or educational methods. Application of these methods to problems of rural areas or agri-business firms is, for the most part, ignored or at best, permitted as an elective course. I am proposing that the MAE stress economic competence equivalent to that expected of M.S. candidates and training in the application of economic analysis to rural and agri-business problems. The attention to business, political science, and education methods makes the MAE

different from our M.S. offerings; the emphasis on economic theory and agricultural applications distinguishes the MAE from existing professional degrees.

The third reason that I propose to create a new degree is the importance of developing an accepted and recognizable alternative to research training. If a new professional degree were established with a reasonable consensus as to the standards and content of that degree, it would present to the world a recognized level of accomplishment with training appropriate to the varieties of jobs that are not research oriented but nonetheless require sound graduate-level training in economics. This established degree would provide students who seek non-research professional training with a recognized certificate of their training that they could present to potential employers and find acceptance rather than questions. Currently, many students find that a degree other than the master of science is not acceptable to many employers. A particular problem has been found by students from foreign countries who hope to return to their homeland and seek positions in government agencies. These students tell us that the master of science degree is the only one that is acceptable. I can understand the problems of employers when a multiplicity of titles ranging from master of agriculture to master of professional studies is presented. Unfortunately, many of these alternative degrees have the reputation of being watered down programs not having the professional rigor that the master of science program contains. For this reason I believe that rigorous professional training producing students who are competent to manage business or government activities or conduct extension teaching programs would be of great benefit not only to our students but also to our programs.

Widespread recognition and acceptance of the MAE is also necessary in order to attract a vital input for the program--faculty. The program outlined above will require as much or more faculty input for advising and arranging appropriate application experiences (internship or paper) as does the M.S. program. It will not, however, have the "payoff" for faculty of co-authored publications that frequently follow a traditional M.S. thesis. In order to attract and hold good faculty in such a program, it is necessary that other members of the profession as well as university administrators and managers of agri-business firms and public agencies recognize the importance of such a degree program and the value of faculty competence in this area. If rewards for high quality work in the MAE program are not likely to be forthcoming, it is doubtful that more than a few faculty will be receptive to the idea.

To gain acceptance, however, requires widespread understanding of the title, content, and rigor. The associations of our profession can provide the forum by which this new program becomes established. We at Penn State have begun the task by creating such a degree program. I know other schools have similar programs, but I don't know of any consensus about title. For example, the University of Maine has a successful program that is very similar to the MAE outlined in this paper, but it is called the Master of Professional Studies. If the idea of a Master of

Agricultural Economics has merit, I urge the members of our profession to communicate with each other and develop a consensus on title and content. A rose by any other name may smell the same, but it's hard to attract buyers if you use the other name in your advertising.

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